

L&D HWG Status Report

27 June 2001 TAEIG Meeting

Discussion Items

- 25.415 Ground Gust
- 25.865 Fire Protection of Flight Controls, Engine Mounts, and other Structure
- Ground Handling, Towing, and Landing Descent Velocity Tasks
- TOR for 25.301(b) Flight Loads Measurement
- NPRM Phase 4 review

25.415 Ground Gust

- WG Report, AC & a draft NPRM
 - Submitted at the 28 March 2001 TAEIG meeting
 - ALPA Rep Jim Bettcher asked for further explanations regarding pilot restraint of the flight controls while gust locks disengaged
 - Additional work was performed for stick free analysis
 - Discussed at 5-7 June 2001 L&DHWG meetings.
- Consensus was that the draft criteria are sufficiently conservative to cover
- WG report revised accordingly

25.415 Ground Gust (cont.)

- The concern is for reversible systems such as manual systems that do not have a significant amount of damping. *Left free become difficult to handle*
- The following conclusions have been reached:
 1. The design load level has been increased by a factor of at least 2.5 relative to earlier design requirements for systems with significant flexibility.
 2. The proposed rule addresses the effect of control surface impact with the control stops for flexible systems.

25.415 Ground Gust (cont.)

3. The L&DHWG does not feel that it is reasonable to operate an aircraft with manual control systems in design ground gust conditions with the pilot not constraining the control systems. This is supported by the FAA Flying Handbook FAA-H-8083-3 Chapter 2 for Ground Operations.
4. Some aircraft have operational procedures that require the gust lock to remain engaged until shortly before takeoff.
5. The L&D HWG is not aware of conclusive evidence of failure of the control systems when the pilot is not constraining the flight controls.

*business advised
f.c.*

*correct ground
maneuvering*

25.415 Ground Gust (cont.)

6. Therefore the L&DHWG believes that the requirements that have been developed for the instance where the pilot constrains the flight controls are adequate.
7. The L&DHWG recommends that the TAEIG consider the need for additional operational procedures or the development of pilot informative material regarding the need for constraint of the flight controls during ground operations.

25.415 Ground Gust (cont.)

The L&DHWG respectfully asks for TAEIG approval to submit the HWG report, draft NPRM and draft AC for 25.415 to the FAA

25.865 Fire Protection of Flight Controls, Engine Mounts, and other Structure

- Status
- The task group is revising their approach to fireproof requirements, in particular the equivalency to steel issues.
- Changes are based upon the revised PPIHWG fireproof definition as recently submitted to the TAEIG
- The L&DHWG now estimates that this task can be completed by 15 March 2002.
 - This will allow 2 to 3 task group meetings
 - And completion of additional testing as required.

TORs for Ground Handling, Towing, & Landing Descent Velocity (Assigned 28 Sept 2000)

- Ground Handling & Towing
 - FAA Special conditions and JAA CRIs for center/aux strut LG have been reviewed and are being used as the basis for draft regulations
 - Braked and unbraked center/aux LG have been considered.
 - Non-extended scenarios for center/aux LG have been considered
 - Progress is on track per work plan approved by TAEIG in Dec.
 - FAA reports for L-1011 and DC9 extended towing under review

TORs for Ground Handling, Towing, & Landing Descent Velocity

(TOR Assigned 28 Sept 2000)

- Landing Descent Velocity
 - The FAA Heathrow wide-body sink rate measurement and data evaluation tasks have been planned and reviewed.
 - On track for July FAA capture of data
 - Data analysis will take longer than originally planned
 - The Airbus wide-body sink rate measurement and data evaluation tasks have been planned and reviewed.
 - Calibration of the airbus system and data recording and analysis will take longer than planned
 - The work plan schedule approved by TAEIG in Dec will not be achieved. A revised date for completion will be provided at the 11-12 Sept TAEIG meeting.

TOR for 25.301(b) Flight Loads Measurement

(TOR Assigned 11 June 2001)

- TOR was published after the June 5-7 L&D HWG meeting
- Work plan is under development for submittal to TAEIG for approval at the 11-12 Sept TAEIG meeting or any earlier Ad Hoc meeting.

NPRM Phase 4 review

- The L&DHWG was asked by Craig Bolt on 3 June 01 to comply with an FAA Request to complete reports to the FAA on a number of draft NPRMs.
- Reports are to contain:
 - comments on the NPRMs and any remaining issues
 - comprehensive responses to the APO's cost/benefit questions
- Due date is 2 August 01.
- Work began on this task at the 5-7 June 01 L&DHWG meeting